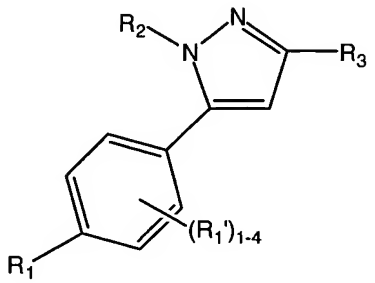
CLAIMS

What is claimed is:

1. A compound of Formula (I), (II), (III) or a pharmaceutically acceptable salt thereof;

wherein the compound of Formula (I) is:



I

wherein:

R_1 is $-S(O)_2-CH_3$ or $-S(O)_2-NH_2$;

R_1' at each occurrence is independently a hydrogen, a halogen, a methyl or CH_2OH;

R_2 is a substituted lower alkyl group, a cycloalkyl group, an aryl group or a heterocyclic ring;

R_3 is:

(a) $-(C(R_4)(R'_4))_k-Y-(C(R_4)(R'_4))_n-O-V$;

(b) $-C(Z)-(C(R_4)(R'_4))_k-O-V$;

(c) $-C(Z)-(C(R_4)(R'_4))_k-Y-(C(R_4)(R'_4))_n-O-V$;

(d) $-(C(R_4)(R'_4))_k-Y-(C(R_4)(R'_4))_n-C(Z)-(C(R_4)(R'_4))_n-O-V$;

(e) $-(C(R_4)(R'_4))_k-CH=CH-(C(R_4)(R'_4))_p-O-V$;

(f) $-(C(R_4)(R'_4))_n-O-V$;

(g) $-(C(R_4)(R'_4))_n-W-Q-(C(R_4)(R'_4))_k-O-V$;

(h) $-C(Z)-W-Q-(C(R_4)(R'_4))_k-O-V$;

(i) $-C(O)-N(R_i)-O-(C(R_4)(R'_4)_n-O-V$;

(j) $-(C(R_4)(R'_4))_k-C\equiv C-(C(R_4)(R'_4))_p-O-V$;

(k) $-(C(R_4)(R'_4))_k-Y-(C(R_4)(R'_4))_k-Y-(C(R_4)(R'_4))_k-O-V$;

(l) $-(C(R_4)(R'_4))_p-E-N(R_i)-O-W-Q-(C(R_4)(R'_4)_k-O-V$;

(m) $-(C(R_4)(R'_4))_p$-E-$N(R_i)$-O-$(C(R_4)(R'_4)_k$-O-V;

(n) $-(C(R_4)(R'_4))_p$-$N(R_i)$-O-$(C(R_4)(R'_4)_k$-O-V;

(o) $-(C(R_4)(R'_4))_p$-O-$N(R_i)$-$(C(R_4)(R'_4)_k$-O-V;

(p) $-(C(R_4)(R'_4))_p$- O-$N(R_i)$-E-$(C(R_4)(R'_4)_k$-O-V;

(q) $-(C(R_4)(R'_4))_p$- O-$N(R_i)$-E-W-Q-$(C(R_4)(R'_4)_k$-O-V;

(r) $-(C(R_4)(R'_4))_p$-C(Z)–Y-$(C(R_4)(R'_4)_k$-O-V;

(s) $-(C(R_4)(R'_4))_p$–Y-C(Z)-$(C(R_4)(R'_4)_k$-O-V; or

(t) $-(C(R_4)(R'_4))_p$–Y-C(Z)-Y-$(C(R_4)(R'_4)_k$-O-V;

R_4 and R'_4 at each occurrence are independently a hydrogen, a halogen, a lower alkyl group, an alkoxy group; or R_4 and R'_4 taken together with the carbon atom to which they are attached are a substituted lower alkyl, a cycloalkyl group, an aryl group or a heterocyclic ring;

V is –NO, $-NO_2$, or a hydrogen;

Y at each occurrence is independently an oxygen,$-S(O)_o-$ or $-N(R_a)R_i-$;

Z is an oxo, a thial, an oxime or a hydrazone;

Q is Y or a covalent bond;

W at each occurrence is independently an aryl group, an alkylaryl group, a heterocyclic ring or an alkylheterocyclic ring;

E is –C(O) or $–S(O)_o$;

R_a is a lone pair of electron a hydrogen or a lower alkyl group;

R_i is a hydrogen, an alkyl, an aryl, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarboxylic ester, an arylcarboxylic ester, an alkylcarboxamido, an arylcarboxamido, an alkylaryl, an alkylsulfinyl, an alkylsulfonyl, an alkylsulfonyloxy, an arylsulfinyl, an arylsulfonyl, arylsulphonyloxy, a sulfonamido, a carboxamido, a carboxylic ester, an aminoalkyl, an aminoaryl, $-(C(R_4)(R'_4))_n$-O–V, a bond to an adjacent atom creating a double bond to that atom, $-(N_2O_2-)^{-}\bullet M^+$, wherein M^+ is an organic or inorganic cation;

o is an integer from 0 to 2;

k is an integer from 1 to 6;

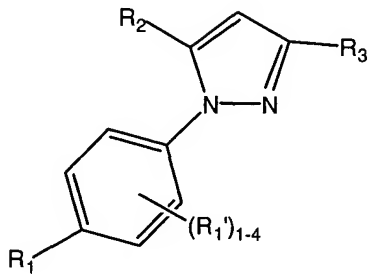
p at each occurrence is independently an integer from 0 to 10;

n at each occurrence is independently an integer from 2 to 10; and

with the proviso that when R_2 is cycloalkyl, aryl or a heterocyclic ring, R_3 cannot be $-(C(R_4)(R'_4))_n$-O–V, where R_4 and R'_4 at each occurrence are independently a hydrogen, a

halogen, a lower alkyl group, an alkoxy group and V is hydrogen;

wherein the compound of Formula (II) is:

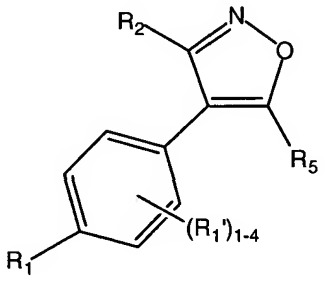


II

wherein R_1, R_1', R_2 and R_3 are as defined herein; and

with the proviso that when R_2 is cycloalkyl, aryl or a heterocyclic ring, R_3 cannot be $-(C(R_4)(R'_4))_n$-O–V, where R_4 and R'_4 at each occurrence are independently a hydrogen, a halogen, a lower alkyl group, an alkoxy group and V is hydrogen;

wherein the compound of Formula (III) is:



III

wherein:

R_5 is:

(a) $-(C(R_4)(R'_4))_k$-Y–$(C(R_4)(R'_4))_k$-B–$(C(R_4)(R'_4))_k$-O-V;

(b) $-(C(R_4)(R'_4))_k$-Y–$(C(R_4)(R_4))_k$-D–$(C(R_4)(R'_4))_k$-O-V;

(c) -C(Z)–$(C(R_4)(R'_4))_k$-Y–$(C(R_4)(R'_4))_k$-O-V;

(d) $-(C(R_4)(R'_4))_k$-Y-W-Q-$C(R_4)(R'_4))_k$-O-V;

(e) -C(Z)–W-Q–$(C(R_4)(R'_4))_k$-O-V;

(f) $-(C(R_4)(R'_4))_p$-E-$N(R_i)$-O-W-Q-$(C(R_4)(R'_4)_k$-O-V;

(g) $-(C(R_4)(R'_4))_p$-E-$N(R_i)$-O-$(C(R_4)(R'_4)_k$-O-V;

(h) $-(C(R_4)(R'_4))_p$-$N(R_i)$-O-$(C(R_4)(R'_4)_k$-O-V;

(i) $-(C(R_4)(R'_4))_p$-O-$N(R_i)$-$(C(R_4)(R'_4)_k$-O-V;

(j) $-(C(R_4)(R'_4))_p$- O-$N(R_i)$-E-$(C(R_4)(R'_4)_k$-O-V; or

(k) $-(C(R_4)(R'_4))_p$- O-$N(R_i)$-E-W-Q-$(C(R_4)(R'_4)_k$-O-V;

B is $-C(Z)-$, $-Y-$ or a covalent bond;

D is $-S(O)_o$ or $-N(R_a)(R_i)$; and

R_1, R_1', R_2, R_4, R'_4, R_a, R_i, E, Y, V, Z, W, Q, o and k are as defined herein.

2. A composition comprising the compound of claim 1 and a pharmaceutically acceptable carrier.

3. A method for treating or reducing inflammation, pain or fever in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 2.

4. A method for treating a gastrointestinal disorder, or improving the gastrointestinal properties of a COX-2 inhibitor in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 2.

5. The method of claim 4, wherein the gastrointestinal disorder is an inflammatory bowel disease, Crohn's disease, gastritis, irritable bowel syndrome, ulcerative colitis, a peptic ulcer, a stress ulcer, a bleeding ulcer, gastric hyperacidity, dyspepsia, gastroparesis, Zollinger-Ellison syndrome, gastroesophageal reflux disease, a bacterial infection, short-bowel (anastomosis) syndrome, or a hypersecretory state associated with systemic mastocytosis or basophilic leukemia and hyperhistaminemia

6. A method for facilitating wound healing in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 2.

7. The method of claim 6, wherein the wound is an ulcer.

8. A method for treating or reversing renal and/or respiratory toxicity in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 2.

9. A method for treating a disorder resulting from elevated levels of COX-2 in a patient in need thereof comprising administering to the patient a therapeutically effective amount

of the composition of claim 2.

10. The method of claim 9, wherein the disorder resulting from elevated levels of COX-2 is angiogenesis, arthritis, asthma, bronchitis, menstrual cramps, premature labor, tendinitis, bursitis, a skin-related condition, neoplasia, an inflammatory process in a disease, an ophthalmic disorder, pulmonary inflammation, a central nervous system disorder, allergic rhinitis, respiratory distress syndrome, endotoxin shock syndrome, atherosclerosis, a microbial infection, a cardiovascular disorder, a urinary disorder, a urological disorder, endothelial dysfunction, organ deterioration, tissue deterioration, or activation, adhesion and infiltration of neutrophils at the site of inflammation.

11. The method of claim 10, wherein the neoplasia is a brain cancer, a bone cancer, an epithelial cell-derived neoplasia (epithelial carcinoma), a basal cell carcinoma, an adenocarcinoma, a gastrointestinal cancer, a lip cancer, a mouth cancer, an esophageal cancer, a small bowel cancer, a stomach cancer, a colon cancer, a liver cancer, a bladder cancer, a pancreas cancer, an ovary cancer, a cervical cancer, a lung cancer, a breast cancer, a skin cancer, a squamus cell cancer, a basal cell cancer, a prostate cancer, a renal cell carcinoma, a cancerous tumor, a growth, a polyp, an adenomatous polyp, a familial adenomatous polyposis or a fibrosis resulting from radiation therapy.

12. The method of claim 10, wherein the central nervous system disorder is cortical dementia, Alzheimer's disease, vascular dementia, multi-infarct dementia, pre-senile dementia, alcoholic dementia, senile dementia, or central nervous system damage resulting from stroke, ischemia or trauma.

13. A method for inhibiting platelet aggregation in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 2.

14. The composition of claim 2, further comprising at least one therapeutic agent.

15. The composition of claim 14, wherein the therapeutic agent is a steroid, a nonsteroidal antiinflammatory compound, a 5-lipoxygenase (5-LO) inhibitor, a leukotriene B_4 receptor antagonist, a leukotriene A_4 hydrolase inhibitor, a 5-HT agonist, a 3-hydroxy-3-methylglutaryl coenzyme A inhibitor, a H_2 antagonist, an antineoplastic agent, an antiplatelet agent, a thrombin inhibitor, a thromboxane inhibitor, a decongestant, a diuretic, a sedating or non-sedating anti-histamine, an inducible nitric oxide synthase inhibitor, an opioid, an analgesic,

a *Helicobacter pylori* inhibitor, a proton pump inhibitor, an isoprostane inhibitor, or a mixture of two or more thereof.

16. The composition of claim 15, wherein the nonsteroidal antiinflammatory compound is acetaminophen, aspirin, diclofenac, ibuprofen, ketoprofen or naproxen.

17. A method for treating or reducing inflammation, pain or fever in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 14.

18. A method for treating a gastrointestinal disorder, or improving the gastrointestinal properties of a COX-2 inhibitor in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 14.

19. The method of claim 18, wherein the gastrointestinal disorder is an inflammatory bowel disease, Crohn's disease, gastritis, irritable bowel syndrome, ulcerative colitis, a peptic ulcer, a stress ulcer, a bleeding ulcer, gastric hyperacidity, dyspepsia, gastroparesis, Zollinger-Ellison syndrome, gastroesophageal reflux disease, a bacterial infection, short-bowel (anastomosis) syndrome, or a hypersecretory state associated with systemic mastocytosis or basophilic leukemia and hyperhistaminemia.

20. A method for facilitating wound healing in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 14.

21. The method of claim 20, wherein the wound is an ulcer.

22. A method for treating or reversing renal and/or respiratory toxicity in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 14.

23. A method for treating a disorder resulting from elevated levels of COX-2 in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 14.

24. The method of claim 23, wherein the disorder resulting from elevated levels of COX-2 is angiogenesis, arthritis, asthma, bronchitis, menstrual cramps, premature labor, tendinitis, bursitis, a skin-related condition, neoplasia, an inflammatory process in a disease, an ophthalmic disorder, pulmonary inflammation, a central nervous system disorder, allergic rhinitis, respiratory distress syndrome, endotoxin shock syndrome, atherosclerosis, a microbial infection, a cardiovascular disorder, a urinary disorder, a urological disorder, endothelial

dysfunction, organ deterioration, tissue deterioration, or activation, adhesion and infiltration of neutrophils at the site of inflammation.

25. The method of claim 24, wherein the neoplasia is a brain cancer, a bone cancer, an epithelial cell-derived neoplasia (epithelial carcinoma), a basal cell carcinoma, an adenocarcinoma, a gastrointestinal cancer, a lip cancer, a mouth cancer, an esophageal cancer, a small bowel cancer, a stomach cancer, a colon cancer, a liver cancer, a bladder cancer, a pancreas cancer, an ovary cancer, a cervical cancer, a lung cancer, a breast cancer, a skin cancer, a squamus cell cancer, a basal cell cancer, a prostate cancer, a renal cell carcinoma, a cancerous tumor, a growth, a polyp, an adenomatous polyp, a familial adenomatous polyposis or a fibrosis resulting from radiation therapy.

26. The method of claim 24, wherein the central nervous system disorder is cortical dementia, Alzheimer's disease, vascular dementia, multi-infarct dementia, pre-senile dementia, alcoholic dementia, senile dementia, or central nervous system damage resulting from stroke, ischemia or trauma.

27. A method for inhibiting platelet aggregation in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 14.

28. A composition comprising at least one compound of claim 1 and at least one compound that donates, transfers or releases nitric oxide, or induces the production of endogenous nitric oxide or endothelium-derived relaxing factor, or is a substrate for nitric oxide synthase.

29. The composition of claim 28, further comprising a pharmaceutically acceptable carrier.

30. The composition of claim 28, wherein the compound that donates, transfers, or releases nitric oxide, or induces the production of endogenous nitric oxide or endothelium-derived relaxing factor or is a substrate for nitric oxide synthase is an S-nitrosothiol.

31. The composition of claim 30, wherein the S-nitrosothiol is S-nitroso-N-acetylcysteine, S-nitroso-captopril, S-nitroso-N-acetylpenicillamine, S-nitroso-homocysteine, S-nitroso-cysteine, S-nitroso-glutathione, or S-nitroso-cysteinyl-glycine.

32. The composition of claim 30, wherein the S-nitrosothiol is:

(i) $HS(C(R_e)(R_f))_mSNO$;

(ii) $ONS(C(R_e)(R_f))_mR_e$; or

(iii) $H_2N\text{-}CH(CO_2H)\text{-}(CH_2)_m\text{-}C(O)NH\text{-}CH(CH_2SNO)\text{-}C(O)NH\text{-}CH_2\text{-}CO_2H$;

wherein m is an integer from 2 to 20; R_e and R_f are each independently a hydrogen, an alkyl, a cycloalkoxy, a halogen, a hydroxy, an hydroxyalkyl, an alkoxyalkyl, an arylheterocyclic ring. a cycloalkylalkyl, a heterocyclicalkyl, an alkoxy, a haloalkoxy, an amino, an alkylamino, a dialkylamino, an arylamino, a diarylamino, an alkylarylamino, an alkoxyhaloalkyl, a haloalkoxy, a sulfonic acid, a sulfonic ester, an alkylsulfonic acid, an arylsulfonic acid, an arylalkoxy, an alkylthio, an arylthio, a cyano, an aminoalkyl, an aminoaryl, an aryl, an arylalkyl, a carboxamido, a alkylcarboxamido, an arylcarboxamido, an amidyl, a carboxyl, a carbamoyl, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarbonyl, an arylcarbonyl, an ester, a carboxylic ester, an alkylcarboxylic ester, an arylcarboxylic ester, a haloalkoxy, a sulfonamido, an alkylsulfonamido, an arylsulfonamido, an alkylsulfonyl, an alkylsulfonyloxy, an arylsulfonyl, an arylsulfonyloxy, a urea, a nitro, -T-Q-, or $-(C(R_g)(R_h))_k\text{-}T\text{-}Q$ or R_e and R_f taken together are an oxo, a thial, a heterocyclic ring, a cycloalkyl group, an oxime, a hydrazone or a bridged cycloalkyl group; Q is -NO or $-NO_2$; and T is independently a covalent bond, a carbonyl, an oxygen, $-S(O)_o-$ or $-N(R_a)R_i-$, wherein o is an integer from 0 to 2, R_a is a lone pair of electrons, a hydrogen or an alkyl group; R_i is a hydrogen, an alkyl, an aryl, an alkylcarboxylic acid, an arylcarboxylic acid, an alkylcarboxylic ester, an arylcarboxylic ester, an alkylcarboxamido, an arylcarboxamido, an alkylsulfinyl, an alkylsulfonyl, an alkylsulfonyloxy, an arylsulfinyl, an arylsulfonyloxy, an arylsulfonyl, a sulfonamido, a carboxamido, a carboxylic ester, an aminoalkyl, an aminoaryl, $-CH_2\text{-}C(T\text{-}Q)(R_g)(R_h)$, or $-(N_2O_2\text{-})^-\bullet M^+$, wherein M^+ is an organic or inorganic cation; with the proviso that when R_i is $-CH_2\text{-}C(T\text{-}Q)(R_g)(R_h)$ or $-(N_2O_2\text{-})\bullet M^+$; then "-T-Q" can be a hydrogen, an alkyl group, an alkoxyalkyl group, an aminoalkyl group, a hydroxy group or an aryl group; and R_g and R_h at each occurrence are independently R_e.

33. The composition of claim 28, wherein the compound that donates, transfers, or releases nitric oxide, or induces the production of endogenous nitric oxide or endothelium-derived relaxing factor, or is a substrate for nitric oxide synthase is L-arginine, L-homoarginine, N-hydroxy-L-arginine, nitrosated L-arginine, nitrosylated L-arginine, nitrosated N-hydroxy-L-arginine, nitrosylated N-hydroxy-L-arginine, nitrosated L-homoarginine, nitrosylated L-homoarginine), citrulline, ornithine, glutamine, lysine, an arginase inhibitor or a nitric oxide

mediator.

34. The composition of claim 28, wherein the compound that donates, transfers, or releases nitric oxide, or induces the production of endogenous nitric oxide or endothelium-derived relaxing factor, or is a substrate for nitric oxide synthase is:

(i) a compound that comprises at least one ON-O- or ON-N- group;

(ii) a compound that comprises at least one O_2N-O-, O_2N-N- or O_2N-S- or group;

(iii) a N-oxo-N-nitrosoamine having the formula: $R^{1"}R^{2"}N$-N(O-M^+)-NO, wherein $R^{1"}$ and $R^{2"}$ are each independently a polypeptide, an amino acid, a sugar, an oligonucleotide, a straight or branched, saturated or unsaturated, aliphatic or aromatic, substituted or unsubstituted hydrocarbon, or a heterocyclic group, and M^+ is an organic or inorganic cation.

35. The composition of claim 34, wherein the compound comprising at least one ON-O- or ON-N- group is an ON-O-polypeptide, an ON-N-polypeptide, an ON-O-amino acid, an ON-N-amino acid, an ON-O-sugar, an ON-N-sugar, an ON-O-oligonucleotide, an ON-N-oligonucleotide, a straight or branched, saturated or unsaturated, substituted or unsubstituted, aliphatic or aromatic ON-O-hydrocarbon, a straight or branched, saturated or unsaturated, substituted or unsubstituted, aliphatic or aromatic ON-N-hydrocarbon, an ON-O-heterocyclic compound or an ON-N-heterocyclic compound.

36. The composition of claim 34, wherein compound comprising at least one O_2N-O-, O_2N-N- or O_2N-S- group is an O_2N-O-polypeptide, an O_2N-N-polypeptide, an O_2N-S-polypeptide, an O_2N-O-amino acid, O_2N-N-amino acid, O_2N-S-amino acid, an O_2N-O-sugar, an O_2N-N-sugar, O_2N-S-sugar, an O_2N-O-oligonucleotide, an O_2N-N-oligonucleotide, an O_2N-S-oligonucleotide, , a straight or branched, saturated or unsaturated, aliphatic or aromatic, substituted or unsubstituted O_2N-O-hydrocarbon, a straight or branched, saturated or unsaturated, aliphatic or aromatic, substituted or unsubstituted O_2N-N-hydrocarbon, a straight or branched, saturated or unsaturated, aliphatic or aromatic, substituted or unsubstituted O_2N-S-hydrocarbon, an O_2N-O-heterocyclic compound, an O_2N-N-heterocyclic compound or an O_2N-S-heterocyclic compound.

37. The composition of claim 28, further comprising at least one therapeutic agent.

38. The composition of claim 37, wherein the therapeutic agent is a steroid, a nonsteroidal antiinflammatory compound, a 5-lipoxygenase (5-LO) inhibitor, a leukotriene B_4

receptor antagonist, a leukotriene A_4 hydrolase inhibitor, a 5-HT agonist, a HMG CoA inhibitor, a H_2 antagonist, an antineoplastic agent, an antiplatelet agent, a thrombin inhibitor, a thromboxane inhibitor, a decongestant, a diuretic, a sedating or non-sedating anti-histamine, an inducible nitric oxide synthase inhibitor, an opioid, an analgesic, a *Helicobacter pylori* inhibitor, a proton pump inhibitor, an isoprostane inhibitor, or a mixture of two or more thereof.

39. The composition of claim 38, wherein the nonsteroidal antiinflammatory compound is acetaminophen, aspirin, diclofenac, ibuprofen, ketoprofen or naproxen.

40. A method for treating or reducing inflammation, pain or fever in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 29 or 37.

41. A method for treating a gastrointestinal disorder, or improving the gastrointestinal properties of a COX-2 inhibitor in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 29 or 37.

42 The method of claim 41, wherein the gastrointestinal disorder is an inflammatory bowel disease, Crohn's disease, gastritis, irritable bowel syndrome, ulcerative colitis, a peptic ulcer, a stress ulcer, a bleeding ulcer, gastric hyperacidity, dyspepsia, gastroparesis, Zollinger-Ellison syndrome, gastroesophageal reflux disease, a bacterial infection, short-bowel (anastomosis) syndrome, or a hypersecretory state associated with systemic mastocytosis or basophilic leukemia and hyperhistaminemia.

43. A method for facilitating wound healing in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 29 or 37.

44. The method of claim 43, wherein the wound is an ulcer.

45. A method for treating or reversing renal and/or respiratory toxicity in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 29 or 37.

46. A method for treating a disorder resulting from elevated levels of COX-2 in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 29 or 37.

47. The method of claim 46, wherein the disorder resulting from elevated levels of COX-2 is angiogenesis, arthritis, asthma, bronchitis, menstrual cramps, premature labor,

tendinitis, bursitis, a skin-related condition, neoplasia, an inflammatory process in a disease, an ophthalmic disorder, pulmonary inflammation, a central nervous system disorder, allergic rhinitis, respiratory distress syndrome, endotoxin shock syndrome, atherosclerosis, a microbial infection, a cardiovascular disorder, a urinary disorder, a urological disorder, endothelial dysfunction, organ deterioration, tissue deterioration, or activation, adhesion and infiltration of neutrophils at the site of inflammation.

48. The method of claim 47, wherein the neoplasia is a brain cancer, a bone cancer, an epithelial cell-derived neoplasia (epithelial carcinoma), a basal cell carcinoma, an adenocarcinoma, a gastrointestinal cancer, a lip cancer, a mouth cancer, an esophageal cancer, a small bowel cancer, a stomach cancer, a colon cancer, a liver cancer, a bladder cancer, a pancreas cancer, an ovary cancer, a cervical cancer, a lung cancer, a breast cancer, a skin cancer, a squamus cell cancer, a basal cell cancer, a prostate cancer, a renal cell carcinoma, a cancerous tumor, a growth, a polyp, an adenomatous polyp, a familial adenomatous polyposis or a fibrosis resulting from radiation therapy.

49. The method of claim 47, wherein the central nervous system disorder is cortical dementia, Alzheimer's disease, vascular dementia, multi-infarct dementia, pre-senile dementia, alcoholic dementia, senile dementia, or central nervous system damage resulting from stroke, ischemia or trauma.

50. A method for inhibiting platelet aggregation in a patient in need thereof comprising administering to the patient a therapeutically effective amount of the composition of claim 29 or 37.

51. A kit comprising at least one compound of claim 1.

52. The kit of claim 51, further comprising (i) at least one compound that donates, transfers or releases nitric oxide, induces the production of endogenous nitric oxide or endothelium-derived relaxing factor, or is a substrate for nitric oxide synthase; (ii) at least one therapeutic agent; or (iii) at least one compound that donates, transfers or releases nitric oxide, induces the production of endogenous nitric oxide or endothelium-derived relaxing factor, or is a substrate for nitric oxide synthase and at least one therapeutic agent.

53. The kit of claim 52, wherein the at least one compound that donates, transfers or releases nitric oxide, induces the production of endogenous nitric oxide or endothelium-derived relaxing factor, or is a substrate for nitric oxide synthase; the at least one therapeutic agent; or the

at least one compound that donates, transfers or releases nitric oxide, induces the production of endogenous nitric oxide or endothelium-derived relaxing factor, or is a substrate for nitric oxide synthase and at least one therapeutic agent; are in the form of separate components in the kit

54. A kit comprising the composition of claim 14, 29 or 37.

55. A compound selected from the group consisting of

1-(1-cyclohexyl-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-4-hydroxybutan-1-one;

1-(3-((1Z)-4-(hydroxy)but-1-enyl)-1-cyclohexylpyrazol-5-yl-4-methylsulfonyl)benzene;

4-(3-((3-hydroxypropoxy)methyl)-1-phenylpyrazol-5-yl)-1-(methylsulfonyl)benzene;

1-(3-(difluoro(3-hydroxypropoxy)methyl)-1-phenylpyrazol-5-yl)-4-(methylsulfonyl)benzene;

1-(1-(4-chlorophenyl)-3-((3-hydroxypropoxy)methyl)pyrazol-5-yl)-4-(methylsulfonyl) benzene;

1-(3-((3-hydroxypropoxy)methyl)-1-(4-methylphenyl)pyrazol-5-yl)-4-(methylsulfonyl)benzene;

1-(3-((3-hydroxypropoxy)methyl)-1-(4-(trifluoromethyl)phenyl)pyrazol-5-yl)-4-(methylsulfonyl)benzene;

1-(3-((3-hydroxypropoxy)methyl)-1-(4-methoxyphenyl)pyrazol-5-yl)-4-(methylsulfonyl) benzene;

1-(3-((1Z)-4-(hydroxy)but-1-enyl)-1-phenylpyrazol-5-yl)-4-methylsulfonyl)benzene;

4-hydroxy-1-(1-(4-methylphenyl)-5-(4-(methylsulfonyl)phenyl)pyrazol-3- yl)butan-1-one;

1-(1-(4-fluorophenyl)-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-4-hydroxybutan-1-one; 1-(1-(4-bromophenyl)-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-4-hydroxybutan-1-one;

1-(1-cyclohexyl-3-((2-hydroxyethoxy)methyl)pyrazol-5-yl)-4-(methylsulfonyl)benzene;

1-(1-cyclohexyl-3-((3-hydroxypropoxy)methyl)pyrazol-5-yl)-4-(methylsulfonyl)benzene;

1-(1-cyclohexyl-3-((3-(hydroxymethyl)phenoxy)methyl)pyrazol-5-yl)-4-(methylsulfonyl)benzene;

1-(1-(4-fluorophenyl)-3-((3-hydroxypropoxy)methyl)pyrazol-5-yl)-4-(methylsulfonyl)benzene;

1-(3-((3-hydroxybutoxy)methyl)-1-phenylpyrazol-5-yl)-4-(methylsulfonyl)benzene;

1-(3-((1E)-4-(hydroxy)but-1-enyl)-1-cyclohexylpyrazol-5-yl)-4-methylsulfonyl)benzene;

1-(1-cyclohexyl-5-(4-(methylsulfonyl)phenyl)-pyrazol-3-yl)-6-hydroxyhexan-1-one;

4-hydroxy-1-(5-(4-(methylsulfonyl)phenyl)-1-(4-(trifluoromethyl)-phenyl)pyrazol-3-yl) butan-1-one;

4-hydroxy-1-(1-(4-methoxyphenyl)-5-(4-(methylsulfonyl)phenyl)-pyrazol-3-yl) butan-1-one;

4–(3-((1E)-3-hydroxyprop-1-enyl)-1-cyclohexylpyrazol-5-yl)-1 (methylsulfonyl) benzene;
1-(1-cyclohexyl-3-(((2-hydroxyethyl)amino)methyl)pyrazol-5-yl)-4-(methylsulfonyl)benzene;
4-(3-(4-hydroxybutanoyl)-5-(4-(methylsulfonyl)phenyl)pyrazolyl) benzenecarbonitrile;
4-(1-cyclohexyl-3-(4-hydroxybutanoyl)pyrazol-5-yl)benzenesulfonamide;
1-(1-(4-chloroophenyl)-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-4-hydroxybutan-1-one;
(1-cyclohexyl-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-N-(2-hydroxyethyl)carboxamide;
(1-cyclohexyl-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-N-(3-hydroxypropyl) carboxamide;
1-(1-cyclooctyl-3-((nitrooxy)methyl)pyrazol-5-yl)-4-methylsulfonyl)benzene;
1-(1-cycloheptyl-3-((nitrooxy)methyl)pyrazol-5-yl)-4-(methylsulfonyl)benzene; 1-(1-
cyclohexyl-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-4-(nitrooxy)butan-1-one
1-(3-((1Z)-4-(nitrooxy)but-1-enyl)-1-cyclohexylpyrazol-5-yl)-4-(methylsulfonyl) benzene;
4-(3-((3-(nitrooxy)propoxy)methyl)-1-phenylpyrazol-5-yl)-1-(methylsulfonyl)benzene;
1-(3-(difluoro(3-(nitrooxy)propoxy)methyl)-1-phenylpyrazol-5-yl)-4-(methylsulfonyl)
benzene;
1-(1-(4-chlorophenyl)-3-((3-(nitrooxy)propoxy)methyl)pyrazol-5-yl)-4-(methylsulfonyl)
benzene;
1-(1-(4-methylphenyl)-3-((3-(nitrooxy)propoxy)methyl)pyrazol-5-yl)-4-(methylsulfonyl)
benzene;
4-(methylsulfonyl)-1-(3-((3-(nitrooxy)propoxy)methyl)-1-(4-(trifluoromethyl)phenyl)pyrazol-5-
yl)benzene;
1-(1-(4-methoxy-3-nitrophenyl)-3-((3-(nitrooxy)propoxy)methyl)pyrazol-5-yl)-4-
(methylsulfonyl) benzene;
1-(3-((1Z)-4-(nitrooxy)but-1-enyl)-1-phenylpyrazol-5-yl)-4- (methylsulfonyl)benzene;
1-(3-((1E)-4-(nitrooxy)but-1-enyl)-1-phenylpyrazol-5-yl)-4-(methylsulfonyl)benzene;
1-(1-(4-methylphenyl)-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-4-(nitrooxy)butan-1-one;
1-(1-(4-fluorophenyl)-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-4-(nitrooxy) butan-1-one
1-(1-(4-bromophenyl)-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-4-(nitrooxy) butan-1-one;
1-(1-cyclohexyl-3-((2-(nitrooxy)ethoxy)methyl)pyrazol-5-yl)-4-(methylsulfonyl)benzene;
1-(1-cyclohexyl-3-((3-(nitrooxy)propoxy)methyl)pyrazol-5-yl)-4-(methylsulfonyl)benzene;
1-(1-cyclohexyl-3-((3-((nitrooxy)methyl)phenoxy)methyl)pyrazol-5-yl)-4-(methylsulfonyl)
benzene;

1-(1-(4-fluorophenyl)-3-((3-(nitrooxy)propoxy)methyl)pyrazol-5-yl)-4- (methylsulfonyl) benzene;

4-(methylsulfonyl)-1-(3-((3-(nitrooxy)butoxy)methyl)-1-phenylpyrazol-5-yl)benzene;

1-(3-((1E)-4-(nitrooxy)but-1-enyl)-1-cyclohexylpyrazol-5-yl)-4-(methylsulfonyl)benzene;

1-(1-cyclohexyl-5-(4-(methylsulfonyl)pyrazol-3-yl)-6-(nitrooxy)hexan-1-one;

1-(5-(4-(methylsulfonyl)phenyl)-1-(4-(trifluoromethyl)phenyl)pyrazol-3-yl)-4-(nitrooxy)butan-1-one;

1-(1-(4-methoxyphenyl)-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl-4-(nitrooxy) butan-1-one;

4-(1-cyclohexyl-3-(2-(nitrooxy)ethyl)pyrazol-5-yl)-1-(methylsulfonyl)benzene;

4-(1-cyclohexyl-3-(3-(nitrooxy)propyl)pyrazol-5-yl)-1-(methylsulfonyl)benzene;

1-(5-(4-(methysulfonyl)phenyl)-1-(2-pyridyl)pyrazol-3-yl)-2-(nitrooxy)ethan-1-one;

4-(1-(4-methoxyphenyl)-3-((3-(nitrooxy)propoxy)methyl)pyrazol-5-yl)-1-(methylsulfonyl) benzene;

4-(1-(4-methyl-3-nitrophenyl)-3-((3-(nitrooxy)propoxy)methyl)pyrazol-5-yl)-1-(methylsulfonyl)benzene;

1-(3-((1E)-3-(nitrooxy)prop-1-enyl)-1-cyclohexylpyrazol-5-yl)-4-(methylsulfonyl) benzene;

4-(5-(4-(methylsulfonyl)phenyl)-3-(4-(nitrooxy)butanoyl)pyrazolyl) benzenecarbonitrile;

4-(1-cyclohexyl-3-(4-(nitrooxy)butanoyl)pyrazol-5-yl)benzenesulfonamide;

1-(1-(4-chlorophenyl)-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-4-(nitrooxy) butan-1-one;

(1-cyclohexyl-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-N-(2-(nitrooxy)ethyl)carboxamide;

(1-cyclohexyl-5-(4-(methylsulfonyl)phenyl)pyrazol-3-yl)-N-(3(nitrooxy) propyl)carboxamide;

3-(nitrooxy)propyl 4-(5-(4-(methylsulfonyl)phenyl)-1-(4-(trifluoromethyl)-phenyl)pyrazol-3-yl)butanoate;

4-(3-((3-hydroxypropoxy)methyl)-5-(4-methylphenyl)pyrazolyl)benzenesulfonamide;

1-(3-((1Z)-4-hydroxybut-1-enyl)-5-(3-pyridnyl)pyrazolyl)-4-(methylsulfonyl)benzene;

4-(5-(4-chlorophenyl)-3-((3-hydroxypropoxy)methyl)pyrazolyl)benzenesulfonamide;

4-(3-((3-hydroxypropoxy)methyl)-5-phenylpyrazolyl)benzenesulfonamide;

4-(5-(4-chlorophenyl)-3-((3-hydroxypropoxy)methyl)pyrazolyl)-benzenesulfonamide;

4-(5-(4-methylphenyl)-3-((3-(nitrooxy)propoxy)methyl)pyrazolyl)benzenesulfonamide;

1-(3-((1Z)-4-(nitrooxy)but-1-enyl)-5-(3-pyridyl)pyrazolyl)-4-(methylsulfonyl)benznene;

4-(5-(4-chlorophenyl)-3-((3-(nitrooxy)propoxy)methyl)pyrazolyl)benzenesulfonamide;

4-(3-((3-(nitrooxy)propoxy)methyl)-5-phenylpyrazolyl)benzenesulfonamide;

4-(5-(chlorophenyl)-3-((3-(nitrooxy)propoxy)methyl)benzene-sulfonamide

4-(5-(3-hydroxypropoxy)methyl)-3-phenylisoxazol-4-yl)benzenesulfonamide;

4-(5-(2-hydroxyethoxy)methyl)-3-phenylisoxazol-4-yl)benzenesulfonamide;

4-(5-((2,2-difluoro-3-hydroxypropoxy)methyl)-3-phenylisoxazol-4-yl)benzenesulfonamide;

4-(3-phenyl-5-(2,2,3,3-tetrafluoro-4-hydroxy)methyl)isoxazol-4-yl)benzenesulfonamide;

4-(5-((2,2,3,3,4,4-hexafluoro-5-hydroxypentyloxy)methyl)-3-phenylisoxazol-4-yl)benzenesulfonamide;

4-(5-((2- ((2-hydroxyethyl)sulfonyl)ethoxy)methyl)-3-phenylisoxazol-4-yl) benzenesulfonamide;

4-(5-(3-nitrooxy)propoxy)methyl)-3-phenylisoxazol-4-yl)benzenesulfonamide;

4-(5-(2-nitrooxy)ethoxy)methyl-3-phenylisoxazol-4-yl)benzenesulfonamide;

4-(5-((2,2-difuoro-3-(nitrooxy)propoxy)methyl)-3-phenylisoxazol-4-yl)benzenesulfoamide;

4-(3-phenyl-5-(2,2,3,3-tetrafluoro-4-hydroxy)methyl)isoxazol-4-yl)benzenesulfonamide; and

4-(5-((2,2,3,3,4,4-hexafluoro-5-(nitrooxy)pentyloxy)methyl)-3-phenylisoxazol-4-yl)benzenesulfonamide;

4-(5-((2-(nitrooxy)ethyl)sulfonyl)ethoxy)methyl)-3-phenylisoxazol-4-yl) benzenesulfonamide;

or a pharmaceutically acceptable salt thereof.

56. A composition comprising at least one compound of claim 55 and a pharmaceutically acceptable carrier.

57. The composition of claim 56, further comprising (i) at least one compound that donates, transfers or releases nitric oxide, induces the production of endogenous nitric oxide or endothelium-derived relaxing factor, or is a substrate for nitric oxide synthase; (ii) at least one therapeutic agent; or (iii) at least one compound that donates, transfers or releases nitric oxide, induces the production of endogenous nitric oxide or endothelium-derived relaxing factor, or is a substrate for nitric oxide synthase and at least one therapeutic agent.

58. A kit comprising at least one compound of claim 55.